

SEQUENCE LISTING

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<120> Method for Rational Mutagenesis of Alpha/Beta T-Cell Receptors
and Correspondingly Mutated MDM2-Protein Specific Alpha/Beta
T-Cell Receptors

<130> BB-140

<140> 10/529,072

<141> 2005-03-24

<150> PCT/EP2003/010633

<151> 2003-09-24

<150> DE 10244457.9

<151> 2002-09-24

<160> 6

<170> PatentIn version 3.3

<210> 1

<211> 200

<212> PRT

<213> Mus musculus

<400> 1

Gln Ser Val Thr Gln Pro Asp Ala Arg Val Thr Val Ser Glu Gly Ala
1 5 10 15

Ser Leu Gln Leu Arg Cys Lys Tyr Ser Tyr Ser Ala Thr Pro Tyr Leu
20 25 30

Phe Trp Tyr Val Gln Tyr Pro Gln Gly Leu Gln Leu Leu Leu Lys Tyr
35 40 45

Tyr Ser Gly Asp Pro Val Val Gln Gly Val Asn Gly Phe Glu Ala Glu
50 55 60

Phe Ser Lys Ser Asn Ser Ser Phe His Leu Arg Lys Ala Ser Val His
65 70 75 80

Trp Ser Asp Ser Ala Val Tyr Phe Cys Ala Val Ser Gly Phe Ala Ser
85 90 95

Ala Leu Thr Phe Gly Ser Gly Thr Lys Val Ile Val Leu Pro Tyr Ile
 100 105 110

Gln Asn Pro Glu Pro Ala Val Tyr Ala Leu Lys Asp Pro Arg Ser Gln
 115 120 125

Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe Asp Ser Gln Ile Asn Val
 130 135 140

Pro Lys Thr Met Glu Ser Gly Thr Phe Ile Thr Asp Ala Thr Val Leu
 145 150 155 160

Asp Met Lys Ala Met Asp Ser Lys Ser Asn Gly Ala Ile Ala Trp Ser
 165 170 175

Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile Phe Lys Glu Thr Asn Ala
 180 185 190

Thr Tyr Pro Ser Ser Asp Val Pro
 195 200

<210> 2
 <211> 236
 <212> PRT
 <213> Mus musculus

<400> 2

Met Lys Arg Leu Leu Cys Ser Leu Leu Gly Leu Leu Cys Thr Gln Val
 1 5 10 15

Cys Trp Val Lys Gly Gln Gln Val Gln Gln Ser Pro Ala Ser Leu Val
 20 25 30

Leu Gln Glu Gly Glu Asn Ala Glu Leu Gln Cys Asn Phe Ser Ser Thr
 35 40 45

Ala Thr Arg Leu Gln Trp Phe Tyr Gln Arg Pro Gly Gly Ser Leu Val
 50 55 60

Ser Leu Leu Tyr Asn Pro Ser Gly Thr Lys His Thr Gly Arg Leu Thr
 65 70 75 80

Ser Thr Thr Val Thr Lys Glu Arg Arg Ser Ser Leu His Ile Ser Ser
85 90 95

Ser Gln Thr Thr Asp Ser Gly Thr Tyr Phe Cys Ala Thr Ser Ser Val
100 105 110

Asn Thr Gly Asn Tyr Lys Tyr Val Phe Gly Ala Gly Thr Arg Leu Lys
115 120 125

Val Ile Ala His Ile Gln Asn Pro Glu Pro Ala Val Tyr Gln Leu Lys
130 135 140

Asp Pro Arg Ser Gln Asp Ser Thr Leu Cys Leu Phe Thr Asp Phe Asp
145 150 155 160

Ser Gln Ile Asn Val Pro Lys Thr Met Glu Ser Gly Thr Phe Ile Thr
165 170 175

Asp Lys Thr Val Leu Asp Met Lys Ala Met Asp Ser Lys Ser Asn Gly
180 185 190

Ala Ile Ala Trp Ser Asn Gln Thr Ser Phe Thr Cys Gln Asp Ile Phe
195 200 205

Lys Glu Thr Asn Ala Thr Tyr Pro Ser Ser Asp Val Pro Cys Asp Ala
210 215 220

Thr Leu Thr Glu Lys Ser Phe Glu Thr Asp Met Asn
225 230 235

<210> 3

<211> 196

<212> PRT

<213> Homo sapiens

<400> 3

Gln Gln Val Lys Gln Asn Ser Pro Ser Leu Ser Val Gln Glu Gly Arg
1 5 10 15

Ile Ser Ile Leu Asn Cys Asp Tyr Thr Asn Ser Met Phe Asp Tyr Phe
20 25 30

Leu Trp Tyr Lys Lys Tyr Pro Ala Glu Gly Pro Thr Phe Leu Ile Ser
 35 40 45

Ile Ser Ser Ile Lys Asp Lys Asn Ala Asp Gly Arg Phe Thr Val Phe
 50 55 60

Leu Asn Lys Ser Ala Lys His Leu Ser Leu His Ile Val Pro Ser Gln
 65 70 75 80

Pro Gly Asp Ser Ala Val Tyr Phe Cys Ala Ala Met Glu Gly Ala Gln
 85 90 95

Lys Leu Val Phe Gly Gln Gly Thr Arg Leu Thr Ile Asn Pro Asn Ile
 100 105 110

Gln Asn Pro Asp Pro Ala Val Tyr Gln Leu Arg Asp Ser Lys Ser Ser
 115 120 125

Asp Lys Ser Val Cys Leu Phe Thr Asp Phe Asp Ser Gln Thr Asn Val
 130 135 140

Ser Gln Ser Lys Asp Ser Asp Val Tyr Ile Thr Lys Thr Val Leu Asp
 145 150 155 160

Met Asp Ser Met Asp Phe Lys Ser Asn Ser Ala Val Ala Trp Ser Asn
 165 170 175

Lys Ser Asp Phe Ala Cys Ala Asn Ala Phe Asn Asn Ser Ile Ile Pro
 180 185 190

Glu Asp Thr Phe
 195

<210> 4
 <211> 236
 <212> PRT
 <213> Mus musculus

<400> 4

Glu Ala Ala Val Thr Gln Ser Pro Arg Asn Lys Val Ala Val Thr Gly
 1 5 10 15

Gly Lys Val Thr Leu Ser Cys Asn Gln Thr Asn Asn His Asn Asn Met
 20 25 30

Tyr Trp Tyr Arg Gln Asp Thr Gly His Gly Leu Arg Leu Ile His Tyr
 35 40 45

Ser Tyr Gly Ala Gly Ser Thr Glu Lys Gly Asp Ile Pro Asp Gly Tyr
 50 55 60

Lys Ala Ser Arg Pro Ser Gln Glu Asn Phe Ser Leu Ile Leu Glu Leu
 65 70 75 80

Ala Thr Pro Ser Gln Thr Ser Val Tyr Phe Cys Ala Ser Gly Gly Gly
 85 90 95

Gly Thr Leu Tyr Phe Gly Ala Gly Thr Arg Leu Ser Val Leu Glu Asp
 100 105 110

Leu Arg Asn Val Thr Pro Pro Lys Val Ser Leu Phe Glu Pro Ser Lys
 115 120 125

Ala Glu Ile Ala Asn Lys Gln Lys Ala Thr Leu Val Cys Leu Ala Arg
 130 135 140

Gly Phe Phe Pro Asp His Val Glu Leu Ser Trp Trp Val Asn Gly Lys
 145 150 155 160

Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Ala Tyr Lys Glu Ser
 165 170 175

Asn Tyr Ser Tyr Cys Leu Ser Ser Arg Leu Arg Val Ser Ala Thr Phe
 180 185 190

Trp His Asn Pro Arg Asn His Phe Arg Cys Gln Val Gln Phe His Gly
 195 200 205

Leu Ser Glu Glu Asp Lys Trp Pro Glu Gly Ser Pro Lys Pro Val Thr
 210 215 220

Gln Asn Ile Ser Ala Glu Ala Trp Gly Arg Ala Asp
 225 230 235

<210> 5
 <211> 307
 <212> PRT
 <213> Mus musculus

<400> 5

Leu Met Asn Lys Trp Val Phe Cys Trp Val Thr Leu Cys Leu Leu Thr
 1 5 10 15

Val Glu Thr Thr His Gly Asp Gly Gly Ile Ile Thr Gln Thr Pro Lys
 20 25 30

Phe Leu Ile Gly Gln Glu Gly Gln Lys Leu Thr Leu Lys Cys Gln Gln
 35 40 45

Asn Phe Asn His Asp Thr Met Tyr Trp Tyr Arg Gln Asp Ser Gly Lys
 50 55 60

Gly Leu Arg Leu Ile Tyr Tyr Ser Ile Thr Glu Asn Asp Leu Gln Lys
 65 70 75 80

Gly Asp Leu Ser Glu Gly Tyr Asp Ala Ser Arg Glu Lys Lys Ser Ser
 85 90 95

Phe Ser Leu Thr Val Thr Ser Ala Gln Lys Asn Glu Met Ala Val Phe
 100 105 110

Leu Cys Ala Ser Gly Asp Trp Gly Tyr Glu Gln Tyr Phe Gly Pro Gly
 115 120 125

Thr Arg Leu Thr Val Leu Glu Asp Leu Arg Asn Val Thr Pro Pro Lys
 130 135 140

Val Ser Leu Phe Glu Pro Ser Lys Ala Glu Ile Ala Asn Lys Gln Lys
 145 150 155 160

Ala Thr Leu Val Cys Leu Ala Arg Gly Phe Phe Pro Asp His Val Glu
 165 170 175

Leu Ser Trp Trp Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr
 180 185 190

Asp Pro Gln Ala Tyr Lys Glu Ser Asn Tyr Ser Tyr Cys Leu Ser Ser
 195 200 205

Arg Leu Arg Val Ser Ala Thr Phe Trp His Asn Pro Arg Asn His Phe
 210 215 220

Arg Cys Gln Val Gln Phe His Gly Leu Ser Glu Glu Asp Lys Trp Pro
 225 230 235 240

Glu Gly Ser Pro Lys Pro Val Thr Gln Asn Ile Ser Ala Glu Ala Trp
 245 250 255

Gly Arg Ala Asp Cys Gly Ile Thr Ser Ala Ser Tyr His Gln Gly Val
 260 265 270

Leu Ser Ala Thr Ile Leu Tyr Glu Ile Leu Leu Gly Lys Ala Thr Leu
 275 280 285

Tyr Ala Val Leu Val Ser Gly Leu Val Leu Met Ala Met Val Lys Lys
 290 295 300

Lys Asn Ser
 305

<210> 6
 <211> 244
 <212> PRT
 <213> Homo sapiens

<400> 6

Asn Ala Gly Val Thr Gln Thr Pro Lys Phe Gln Val Leu Lys Thr Gly
 1 5 10 15

Gln Ser Met Thr Leu Gln Cys Ala Gln Asp Met Asn His Glu Tyr Met
 20 25 30

Ser Trp Tyr Arg Gln Asp Pro Gly Met Gly Leu Arg Leu Ile His Tyr
 35 40 45

Ser Val Gly Ala Gly Ile Thr Asp Gln Gly Glu Val Pro Asn Gly Tyr
 50 55 60

Asn Val Ser Arg Ser Thr Thr Glu Asp Phe Pro Leu Arg Leu Leu Ser
65 70 75 80

Ala Ala Pro Ser Gln Thr Ser Val Tyr Phe Cys Ala Ser Ser Tyr Pro
85 90 95

Gly Gly Gly Phe Tyr Glu Gln Tyr Phe Gly Pro Gly Thr Arg Leu Thr
100 105 110

Val Thr Glu Asp Leu Lys Asn Val Phe Pro Pro Glu Val Ala Val Phe
115 120 125

Glu Pro Ser Glu Ala Glu Ile Ser His Thr Gln Lys Ala Thr Leu Val
130 135 140

Cys Leu Ala Thr Gly Phe Tyr Pro Asp His Val Glu Leu Ser Trp Trp
145 150 155 160

Val Asn Gly Lys Glu Val His Ser Gly Val Ser Thr Asp Pro Gln Pro
165 170 175

Leu Lys Glu Gln Pro Ala Leu Asn Asp Ser Arg Tyr Ala Leu Ser Ser
180 185 190

Arg Leu Arg Val Ser Ala Thr Phe Trp Gln Asp Pro Arg Asn His Phe
195 200 205

Arg Cys Gln Val Gln Phe Tyr Gly Leu Ser Glu Asn Asp Glu Trp Thr
210 215 220

Gln Asp Arg Ala Lys Pro Val Thr Gln Ile Val Ser Ala Glu Ala Trp
225 230 235 240

Gly Arg Ala Asp